

SECTION 8

8.22 JOINT RESTRAINT DEVICES:

Joint restraint devices shall be used at all bends and fittings where kick blocks cannot be used due to existing field conditions or where joint restraint devices are specifically required. Joint restraint devices shall be required for the following installations:

1. Fire hydrants
2. Fire line connections
3. Three inch and larger domestic line connections
4. Vertical bends
5. Reducers
6. Vertical and horizontal offsets
7. Bends, line valves and fittings
8. 90 degree horizontal bends
9. Bulkheads and plugs
10. Bored casings
11. When it is not possible to place against undisturbed earth
12. When, in the opinion of Denver Water, the bearing capacity of the soil is not sufficient to provide adequate restraint

Horizontal and vertical offsets and reducers shall be restrained on each side of the fitting. For all other fittings, the length of tied pipe shall be in accordance with Sheet 20 of the Standard Drawings. All joint restraint devices and appurtenances shall conform to 6.05 D and Sheets 20 through 27 of the Standard Drawings.